

Rules and Regulations for the Construction and Classification of Ships for the Carriage of Liquefied Gases in Bulk, July 2008

Notice No. 6

Effective Date of Latest Amendments:

See page 1

Issue date: January 2010



RULES AND REGULATIONS FOR THE CONSTRUCTION AND CLASSIFICATION OF SHIPS FOR THE CARRIAGE OF LIQUEFIED GASES IN BULK, *July 2008*

Notice No. 6

This Notice contains amendments within the following Sections of the *Rules and Regulations for the Construction of Ships for the Carriage of Liquefied Gases in Bulk, July 2008.* The amendments are effective on the dates shown:

Chapter	***Section***	***Effective date***
4	4	1 July 2010

The *Rules and Regulations for the Construction and Classification of Ships for the Carriage of Liquefied Gases in Bulk, July 2008* are to be read in conjunction with this Notice No. 6. The status of the Rules is now:

Rules for Ships for Liquefied Gases	Effective date:	July 2008
Notice No. 1	Effective date:	1 July 2008
Notice No. 2	Effective dates:	1 August 2008, 1 November 2008 & Corrigenda
Notice No. 3	Effective dates:	1 January 2009 & Corrigendum
Notice No. 4	Effective dates:	1 April 2009 & Corrigenda
Notice No. 5	Effective date:	1 January 2010 & Corrigenda
Notice No. 6	Effective date:	1 July 2010

All text which does not appear in the IGC Code is prefixed by 'LR' and thick vertical lines (*see* LR II.3)

Chapter 4
Cargo Containment

Effective date 1 July 2010

LR 4.4–04 Symbols:

b = width of plating supported, in metres

f = $1,1 - \frac{s}{2500S}$ but need not exceed 1,0

f_s = 2,7 for nickel steels and carbon manganese steels
= 3,9 for austenitic steels and aluminium alloys

h = vertical distance, from the middle of the effective span of stiffener or transverse to the top of the tank, in metres

l = effective span or girder or web, in metres, *see* Pt 3, Ch 3,3.3

l_e = effective length of stiffening member, in metres, *see* Pt 3, Ch 3,3.3

l_t, l_s, l_b, l_c are effective spans measured according to Fig. LR 4.4

ρ = maximum density of the cargo, in kg/m^3, at the design temperature

k = higher tensile steel factor, (*see* Pt 3, Ch 2,1.2 of the Rules for Ships)

t_p = thickness, in mm, of the attached load bearing plating. Where this varies over the effective width of plating, the mean thickness is to be used.

P = harbour relief valve pressure, in bar

P_{eq} = the internal pressure head, in bar, as derived from 4.3.2.1 and 4.3.2.2 and measured at a point on the plate one-third of the depth of the plate above its lower edge

s = spacing of bulkhead stiffeners, in mm

S = spacing of primary members, in metres

S_w and s_1 are as defined in Pt 3, Ch 10,5.2, Fig. 10.5.1 of the Rules for Ships.

The remaining symbols are as defined in Pt 4, Ch 1,9.2 of the Rules for Ships. The lateral and torsional stability of stiffeners should comply with the requirements of Pt 4, Ch 9,5.6 of the Rules for Ships.

(Part only shown)

LR 4.4–05 The scantlings of the cargo tanks are to comply with the requirements of LR 4.4-06 and the following:

(a) **Minimum thickness.**
No part of the cargo tank structure is to be less than 7,5 mm in thickness.

(b) **Boundary plating.**
The thickness of plating forming the boundaries of cargo tanks is to be not less than 7,5 mm, nor less than:

$$t = 0,011sf\sqrt{P_{eq}\,k} \text{ mm}$$

NOTE
Additional corrosion allowance of 1 mm is to be added to the thickness derived if the cargo is of corrosive nature, *see also* 4.5.2.1, LR 4.5-05.
where

(c) **Rolled or built stiffeners.**
The section modulus of rolled or built stiffeners on plating forming tank boundaries is to be not less than:

$$Z = \frac{P_{eq}\,sk\,l_e^2}{2,7\gamma\,(\omega_1 + \omega_2 + 2)} \text{ cm}^3$$

$$Z = \frac{P_{eq}\,sk\,l_e^2}{f_s\gamma\,(\omega_1 + \omega_2 + 2)} \text{ cm}^3$$

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